

DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
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Manual  
No. 1110-I -4005


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Engineering and Design  
**IN-SITU AIR SPARGING**

1. **Purpose.** The primary purpose of this Engineer Manual (EM) is to provide practical guidance for evaluation of the feasibility of in-situ air sparging (IAS) for remediation of contaminated groundwater and soil. A secondary purpose is to describe design and operational considerations for IAS systems.
2. **Applicability.** This EM applies to all major subordinate commands (MSC), district commands, laboratories and field operating activities having Civil Works and/or Military Programs hazardous, toxic, or radioactive waste (HTRW) responsibilities.
3. **References.** References are provided in Appendix A.
4. **Distribution Statement.** Approved for public release, distribution is unlimited.
5. **Discussion.** IAS is a rapidly emerging remediation technology. This manual provides the information needed to help assure the appropriate applicability of this technology. Designers and decision makers should use this manual to help them determine the necessary site characterization information needed, and to use that information to evaluate the potential effectiveness of IAS on their sites. The design and operational considerations discussed herein should be used as a guide for designers and reviewers. Since this technology is still evolving, designers are encouraged to use the resources provided in this manual to monitor new developments in the design and operational aspects of IAS systems.

FOR THE COMMANDER:

1 Appendix  
App A - References

  
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Chief of Staff

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